



Tick Removal

U. S. Army Center for Health Promotion and Preventive Medicine

REMOVE TICKS PROMPTLY

✱ If a tick is found attached to the body (Figure 1), seek assistance from medical authorities for proper removal, or follow these guidelines:

(1) **Grasp the tick's mouthparts** against the skin, using pointed tweezers (Figure 2).

(2) **Pull back** slowly and steadily with firm force.

(a) Pull in the reverse of the direction in which the mouthparts are inserted, as you would for a splinter (Figure 2).

(b) **BE PATIENT** – The long, central mouthpart (called the hypostome) is inserted in the skin. It is covered with sharp barbs, sometimes making removal difficult and time-consuming (Figure 3, inset).

(c) Most ticks secrete a cement-like substance during feeding. This material helps secure their mouthparts firmly in the flesh, adding to the difficulty of removal.

(d) It is important to continue to pull steadily until the tick can be eased out of the skin (Figure 3).

(e) **DO NOT** pull back sharply, as this may tear the mouthparts from the body of the tick, leaving them embedded in the skin. If this happens, do not panic. Embedded mouthparts are comparable to having a splinter in your skin. Mouthparts alone cannot transmit disease because the infective body of the tick is no longer attached. However, to prevent the chance of secondary infection, it is best to remove them. Seek medical assistance if necessary.

(f) **DO NOT** squeeze or crush the body of the tick because this may force infective body fluids through the mouthparts and into the wound site.

(g) **DO NOT** apply substances such as petroleum jelly, finger nail polish, finger nail polish remover, repellents, pesticides, or a lighted match to the tick while it is attached as these materials might agitate the tick and cause it to force more infective fluid into the wound site. These materials are either ineffective, or worse, might agitate the tick and cause it to force more infective fluid into the wound site.

✱ Following removal of the tick, wash the wound (and your hands) with soap and water and apply an antiseptic.

✱ **Save the tick** for future identification should you later develop disease symptoms. Preserve it by placing it in a clean, dry jar, vial, small Ziploc plastic bag, or other sealed container and keeping it in the freezer. Identification of the tick will help the physician's diagnosis and treatment, since many tick-borne diseases are transmitted only by certain species.

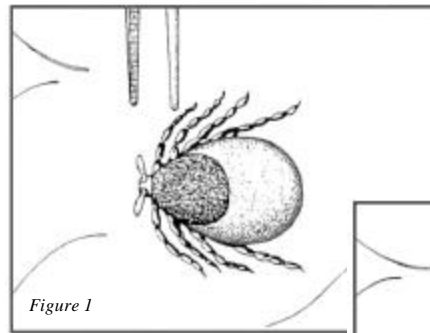


Figure 1

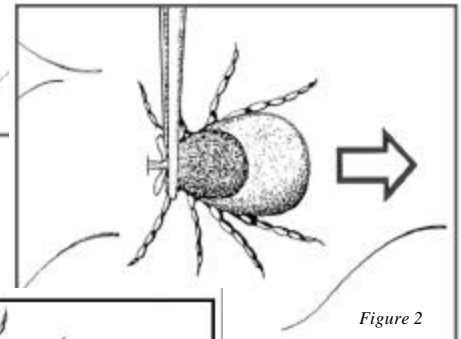


Figure 2

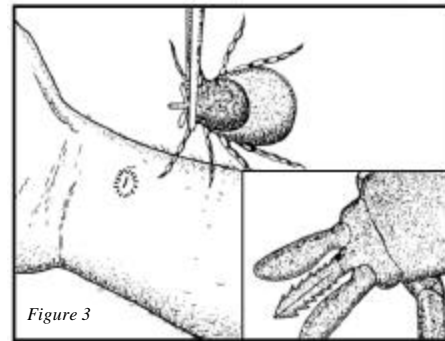


Figure 3

✱ You may discard the tick after one month; all known tick-borne diseases will generally display symptoms within this time period.

✱ A tick needs a blood meal from a host in order to molt (progress to the next stage of its life cycle), and to reproduce (lay eggs). This feeding process continues for several days to a week until the tick is fully engorged with blood. It then releases its hold on the host, drops off, and subsequently molts or lays eggs.

✱ If the tick is infected with pathogenic organisms (for example, *Borrelia burgdorferi*, the agent of Lyme disease), it can transmit the infection to the host during the feeding process. As the tick feeds, the pathogens multiply, migrate to the tick's salivary glands, and are carried into the wound site along with the saliva.

✱ Successful transmission of pathogens requires the tick to be attached for at least several hours. Therefore, the sooner infective ticks are removed, the less likely they will be able to transmit infection. It is impossible to tell if a tick is infected just by looking at it. Only analysis in a laboratory can determine infection status.

